

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (ORIGINAL) A triceps dip exercise machine, comprising:

a main frame having a user support pivot mount, a forward end, and a rear end;

a user support pivotally mounted on the user support pivot mount for supporting a user in a seated position and movable between a start position and an end position at a different angle from the start position;

an exercise arm movably mounted on the frame, the exercise arm having handles for gripping by a user in performing a triceps dip exercise and the exercise arm being movable between a start position and an end position;

a connecting linkage connecting movement of the exercise arm to movement of the user support, whereby movement of the exercise arm from the start to the end position simultaneously rotates the user support from the start to the end position; and

a load for resisting movement of at least one of the moving parts of the machine;

whereby the combined motion of the user support frame and exercise arm between the start and end position substantially replicates the natural movement of the human body when performing a free bar triceps dip exercise.

2. (ORIGINAL) The machine as claimed in claim 1, wherein the end position of the user support is reclined relative to the start position.

3. (ORIGINAL) The machine as claimed in claim 1, wherein the start position of the user support is a forwardly inclined position.

4. (ORIGINAL) The machine as claimed in claim 1, wherein the end position of the user support is a rearwardly reclined position.

5. (ORIGINAL) The machine as claimed in claim 1, wherein the user support has a seat pad and a back pad fixed in position relative to one another throughout the exercise movement.
6. (ORIGINAL) The machine as claimed in claim 5, wherein the back pad is at a forward inclination of approximately 10 to 15 degrees to the vertical in the start position.
7. (ORIGINAL) The machine as claimed in claim 6, wherein the back pad is at a rearwardly reclined angle in the end position.
8. (ORIGINAL) The machine as claimed in claim 7, wherein the rearwardly reclined angle is in the range of 8 to 12 degrees to the vertical in the end position of the user support.
9. (ORIGINAL) The machine as claimed in claim 5, wherein the user support further includes a foot plate for supporting the user's feet in a fixed position on the user support throughout the exercise movement.
10. (ORIGINAL) The machine as claimed in claim 1, including a stationary foot rest mounted on the main frame in front of the user support for supporting the user's feet during an exercise movement.
11. (ORIGINAL) The machine as claimed in claim 1, wherein the exercise arm is moveably mounted on the frame for rotation about an exercise arm pivot.
12. (ORIGINAL) The machine as claimed in claim 11, wherein the exercise arm pivot is positioned rearward of the user support.
13. (ORIGINAL) The machine as claimed in claim 1, wherein the exercise arm is moveably mounted on the frame for movement in a linear path.

14. (CURRENTLY AMENDED) The machine as claimed in claim 1, wherein the start positions of the exercise arm and user support place the handles on opposite sides of the user's body, under the shoulder ~~and adjacent the side centerline of the body~~, and the end positions of the exercise arm and user support place the handles ~~in line with the user's side centerline and~~ slightly below the user's hips, whereby the user starts the exercise with their elbows bent and their hands gripping the handles slightly below their shoulders, and finishes the exercise with their arms extending straight down on-opposite sides of their body ~~and in line with the side centerline of their body~~.

15. (ORIGINAL) The machine as claimed in claim 1, wherein the user support pivot mount is positioned at a predetermined location under the user support frame and beneath the user's body when supported on the frame, the pivot mount defining a vertical, gravitational center line, whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame between a start position and an end position, the user support pivot mount being positioned such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational centerline of the pivot mount in both the start and end position and only a portion of the combined weight passes through the gravitational centerline during the exercise movement.

16. (ORIGINAL) The machine as claimed in claim 15, wherein the user support has a seat pad and a back pad, and the pivot mount is located beneath the seat pad.

17. (ORIGINAL) The machine as claimed in claim 1, wherein the exercise arm comprises a single rigid exercise arm having opposite arm portions extending on opposite sides of the user support, the handles comprising angled outer end portions of said arm portions.

18. (ORIGINAL) The machine as claimed in claim 1, wherein said handles are adjustably mounted for adjusting the spacing between the handles.

19. (ORIGINAL) The machine as claimed in claim 1, wherein said handles have relatively angled gripping portions for providing multiple hand grip positions.

20. (ORIGINAL) The machine as claimed in claim 1, wherein a pair of independently movable exercise arms are movably mounted on the frame, each exercise arm having a handle for engagement by a respective one of the user's hands.
21. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link is a rigid link.
22. (ORIGINAL) The machine as claimed in claim 21, wherein the connecting link has a first end pivoted to said exercise arm and a second end pivoted to said user support frame.
23. (ORIGINAL) The machine as claimed in claim 22, wherein the user support has a seat portion and a backrest portion, and the second end of the connecting link is pivoted to said backrest portion.
24. (ORIGINAL) The machine as claimed in claim 22, wherein the first end of the connecting link is pivoted to the exercise arm at a location higher than the pivot of the second end of the connecting link to the user support.
25. (ORIGINAL) The machine as claimed in claim 22, wherein the first end of the connecting link is pivoted to the exercise arm at a location lower than the pivot of the second end of the connecting link to the user support.
26. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link is adjustable in length.
27. (ORIGINAL) The machine as claimed in claim 1, including a slide member slidably mounted on said user support, the connecting link having a first end pivoted to said slide member and a second end pivoted to said exercise arm.
28. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link comprises a first gear toothed cam mounted on said exercise arm, and a second gear toothed cam mounted on said

user support and meshing with said first gear toothed cam so as to link movement of said exercise arm with movement of said user support.

29. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link comprises a wedge member movably engaged with said main frame and user support, and said exercise arm is linked to said moving wedge member.

30. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link comprises a cable and pulley linkage.

31. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link comprises a slide member slidably mounted on said main frame, a first linkage connecting said slide member to said user support, and a second linkage connecting said slide member to said exercise arm.

32. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link comprises a multiple bar linkage system between said user-support, exercise arm, and the user support pivot mount on said main frame.

33. (ORIGINAL) The machine as claimed in claim 1, wherein the user support has a seat portion and a back rest portion, the multiple bar linkage system comprising a first link pivotally connecting a first location on the user support pivot mount to the back rest portion of the user support, a second link pivotally connecting a second location on the user support pivot mount to the seat portion of the user support, the first location being spaced upwardly from said second location, and a third link pivotally connecting said exercise arm to said main frame, said third link also being pivotally connected to said second link.

34. (ORIGINAL) The machine as claimed in claim 1, further comprising a round cam rotatably mounted on said user support pivot mount, the user support being secured to said round cam, wherein said round cam comprises a pivot connection between the pivot mount and user support.

35. (ORIGINAL) The machine as claimed in claim 34, wherein the connecting link comprises a cable and pulley linkage between said exercise arm and said round cam.
36. (ORIGINAL) The machine as claimed in claim 34, wherein the round cam comprises a double cam having a first, large diameter portion and a second, smaller diameter portion, the user support being mounted on the first portion of the double cam.
37. (ORIGINAL) The machine as claimed in claim 36, wherein the connecting link comprises a connection between said exercise arm and the second portion of said double cam.
38. (ORIGINAL) The machine as claimed in claim 36, wherein the load is connected to the first portion of said double cam.
39. (ORIGINAL) The machine as claimed in claim 1, wherein the load comprises a selectorized weight stack.
40. (ORIGINAL) The machine as claimed in claim 1, wherein the load comprises weight plates.
41. (ORIGINAL) The machine as claimed in claim 1, wherein the load is linked to said user support frame.
42. (ORIGINAL) The machine as claimed in claim 1, wherein the load is linked to said exercise arm.
43. (ORIGINAL) The machine as claimed in claim 1, wherein the load is linked to said connecting link.
44. (ORIGINAL) The machine as claimed in claim 1, wherein the main frame has a base having a forward end and a rear end, and a rear upright at the rear end of the base, the exercise arm being movably mounted on said rear upright and having arm portions projecting forward on opposite sides of said user support.

45. (ORIGINAL) A triceps dip exercise machine for performing exercises equivalent to a free bar dip exercise, comprising:

a main frame having a forward end and a rear end;

a user support pivot mount on the main frame;

a user support frame pivotally mounted on the user support pivot mount, the user support frame comprising one moving part of the machine, and having a seat portion and a back rest portion;

at least one exercise arm movably mounted on one of the frames for engagement by the user in performing exercises, the exercise arm having at least one handle, and comprising a second moving part of the machine;

a connecting link movably engaged with at least two of the main frame, user support frame and exercise arm for linking movement of the exercise arm to movement of the user support frame, the connecting link comprising a third moving part of the machine;

a load for resisting movement of at least one of the moving parts of the machine;

whereby movement of the handle in an exercise movement to move the exercise arm from a start position to an end position simultaneously moves the user support frame between a start position and an end position, the back rest portion being fixed in position relative to the seat portion throughout the exercise movement; and

whereby the combined motion of the user support frame and exercise arm between the start and end position substantially replicates the natural movement of the human body when performing a free bar triceps dip exercise.

46. (CURRENTLY AMENDED) The machine as claimed in claim 45, wherein the exercise arm and user support frame are positioned relative to one another in the start position such that the handle is located below the shoulders of a user seated in the user support frame, and are positioned relative to one another in the end position such that the handle is located directly below the hips of the user seated in the user support frame ~~and in line with the side centerline of the user~~, whereby the user's arms extend straight down ~~and in line with the side centerline of their body~~ in the exercise end position.

47. (ORIGINAL) The machine as claimed in claim 45, wherein the exercise arm has opposite arm portions extending on opposite sides of the user support frame and a handle at the end of each arm portion.
48. (ORIGINAL) The machine as claimed in claim 45, comprising two separate, independent exercise arms movably mounted on the main frame to extend on opposite sides of the user support frame, each exercise arm having a handle for gripping by a user.
49. (ORIGINAL) The machine as claimed in claim 45, wherein the user support frame has a foot rest for supporting the feet of a user seated on the user support frame.
50. (ORIGINAL) The machine as claimed in claim 49, wherein the foot rest is fixed in position relative to the seat portion and back rest portion throughout the exercise movement.
51. (ORIGINAL) The machine as claimed in claim 45, further comprising a foot rest mounted on the main frame in front of the user support frame for supporting the user's feet during an exercise movement.
52. (ORIGINAL) The machine as claimed in claim 45, wherein the pivot mount is located beneath the seat portion of the user support-frame.
53. (ORIGINAL) The machine as claimed in claim 45, wherein the pivot mount is located behind the back rest portion of the user support frame.
54. (ORIGINAL) The machine as claimed in claim 53, wherein the back rest portion of the user support frame has an upper end, and the pivot mount is pivotally connected to the upper end of the back rest portion.
55. (NEW) The machine as claimed in claim 46, wherein the exercise arm and user support frame are positioned relative to one another in the end position such that the handle is located in line with

the side centerline of the user's body, whereby the user's arms extend substantially in line with the side centerline of their body in the exercise end position.

56. (NEW) The machine as claimed in claim 14, wherein the end positions of the exercise arm and user support place the handles substantially in line with the user's side centerline, whereby the user finishes the exercise with their arms substantially in line with the side centerline of their body.